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CLAIMS

A peptide of the formula:

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Y-Met-Ser-Thr-Ile-Pro-Lys-Pro-Gln-Arg-Lys-Thr-Lys-Arg-Asn-Thr-Asn-Arg-Arg-Pro-Gln-Z-X.

(I)

Where Y is NH_2 , one or more N-terminal amino acids, or other chemical entities added to facilitate coupling; Z is a bond, (an) amino acid(s), or (a) chemical group(s) which may be used for linking; and X is OH, NH_2 , or a linkage involving either of these groups.

20 2. A peptide of the formula:

(II)

Y-Pro-Gln-Arg-Lys-Thr-Lys-Arg-Asn-Thr-Asn-Arg-Arg-Pro-Gln-Asp-Val-Lys-Phe-Pro-Gly-Z-X.

Where Y is NH₂, one or more N-terminal amino acids, or other chemical entities added to facilitate coupling; Z is a bond, (an) amino acid(s), or (a) chemical group(s) which may be used for linking; and X is OH, NH₂, or a linkage involving either of these groups.

3. A peptide of the formula:

(III)

Y-Arg-Asn-Thr-Asn-Arg-Arg-Pro-Gln-Asp-Val-Lys-Phe-Pro-Gly-Gly-Gly-Gln-Ile-Val-Gly-Z-X.

Where Y is NH_2 , one or more N-terminal amino acids, or other chemical entities added to facilitate coupling; Z is a bond, (an) amino acid(s), or (a) chemical group(s) which may be used for linking; and X is OH, NH_2 , or a linkage involving either of these groups.

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4. A peptide of the formula:

(IV)

Y-Leu-Pro-Arg-Arg-Gly-Pro-Arg-Leu-Gly-Val-Arg-Ala-Thr-Arg-Lys-Thr-Ser-Glu-Arg-Ser-Z-X.

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Where Y is NH_2 , one or more N-terminal amino acids, or other chemical entities added to facilitate coupling; Z is a bond, (an) amino acid(s), or (a) chemical group(s) which may be used for linking; and X is OH, NH_2 , or a linkage involving either of these groups.

5. A peptide of the formula:

(V)

 $\label{lem:conditional} Y-Thr-Arg-Lys-Thr-Ser-Glu-Arg-Ser-Gln-Pro-Arg-Gly-Arg-Gln-Pro-Ile-Pro-Lys-Val-Z-X.$

Where Y is NH_2 , one or more N-terminal amino acids, or other chemical entities added to facilitate coupling; Z is a bond, (an) amino acid(s), or (a) chemical group(s) which may be used for linking; and X is OH, NH_2 , or a linkage involving either of these

groups.

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6. A peptide of the formula:

(VI)

Y-Arg-Arg-Gln-Pro-Ile-Pro-Lys-Val-Arg-Arg-Pro-Glu-Gly-Arg-Thr-Trp-Ala-Gln-Pro-Gly-Z-X.

Where Y is NH_2 , one or more N-terminal amino acids, or other chemical entities added to facilitate coupling; Z is a bond, (an) amino acid(s), or (a) chemical group(s) which may be used for linking; and X is OH, NH_2 , or a linkage involving either of these groups.

A peptide of the formula:

(VII)

Y-Gly-Arg-Thr-Trp-Ala-Gln-Pro-Gly-Tyr-Pro-Trp-Pro-Leu-Tyr-Gly-Asn-Glu-Gly-Cys-Gly-Z-X.

Where Y is NH₂, one or more N-terminal amino acids, or other chemical entities added to facilitate coupling; Z is a bond, (an) amino acid(s), or (a) chemical group(s) which may be used for linking; and X is OH, NH₂, or a linkage involving either of these groups.

s 8. A peptide of the formula:

(VIII)

Y-Leu-Ser-Gly-Lys-Pro-Ala-Ile-Ile-Pro-Asp-Arg-Glu-Val-Leu-Tyr-Arg-Glu-Phe-Asp-Glu-Z-X.

Where Y is NH₂, one or more N-terminal amino acids, or other

chemical entities added to facilitate coupling; Z is a bond, (an) amino acid(s), or (a) chemical group(s) which may be used for linking; and X is OH, NH₂, or a linkage involving either of these groups.

9. A peptide of the formula:

(IX)

Y-lle-lle-Pro-Asp-Arg-Glu-Val-Leu-Tyr-Arg-Glu-Phe-Asp-Glu-Met-Glu-Glu-Cys-Ser-Gln-Z-X.

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Where Y is NH_2 , one or more N-terminal amino acids, or other chemical entities added to facilitate coupling; Z is a bond, (an) amino acid(s), or (a) chemical group(s) which may be used for linking; and X is OH, NH_2 , or a linkage involving either of these groups.

10. A peptide of the formula:

(X)

Y-Asp-Glu-Met-Glu-Glu-Cys-Ser-Gln-His-Leu-Pro-Tyr-Ile-Glu-Gln-Gly-Met-Met-Leu-Ala-Z-X.

Where Y is NH_2 , one or more N-terminal amino acids, or other chemical entities added to facilitate coupling; Z is a bond, (an) amino acid(s), or (a) chemical group(s) which may be used for linking; and X is OH, NH_2 , or a linkage involving either of these groups.

11. A peptide of the formula:

(IX)

Y-Ser-Gln-His-Leu-Pro-Tyr-Ile-Glu-Gln-Gly-Met-Met-Leu-Ala-Glu-Gln-

Phe-Lys-Gln-Lys-Z-X.

Where Y is NH_2 , one or more N-terminal amino acids, or other chemical entities added to facilitate coupling; Z is a bond, (an) amino acid(s), or (a) chemical group(s) which may be used for linking; and X is OH, NH_2 , or a linkage involving either of these groups.

12. A peptide of the formula:

(XII)

Y-Ile-Glu-Gln-Gly-Met-Met-Leu-Ala-Glu-Gln-Phe-Lys-Gln-Lys-Ala-Leu-Gly-Leu-Leu-Gln-Z-X.

Where Y is NH_2 , one or more N-terminal amino acids, or other chemical entities added to facilitate coupling; Z is a bond, (an) amino acid(s), or (a) chemical group(s) which may be used for linking; and X is OH, NH_2 , or a linkage involving either of these groups.

20 13. A peptide of the formula:

(XIII)

Y-Leu-Ala-Glu-Gln-Phe-Lys-Gln-Lys-Ala-Leu-Gly-Leu-Leu-Gln-Thr-Ala-Ser-Arg-Gln-Ala-Z-X.

Where Y is NH₂, one or more N-terminal amino acids, or other chemical entities added to facilitate coupling; Z is a bond, (an) amino acid(s), or (a) chemical group(s) which may be used for linking; and X is OH, NH₂, or a linkage involving either of these groups.

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14. A peptide of the formula:

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(XIV)

Y-Gln-Lys-Ala-Leu-Gly-Leu-Leu-Gln-Thr-Ala-Ser-Arg-Gln-Ala-Glu-Val-Ile-Ala-Pro-Ala-Z-X.

Where Y is NH_2 , one or more N-terminal amino acids, or other chemical entities added to facilitate coupling; Z is a bond, (an) amino acid(s), or (a) chemical group(s) which may be used for linking; and X is OH, NH_2 , or a linkage involving either of these groups.

15. A peptide of the formula:

(XV)

Y-Glu-Asp-Glu-Arg-Glu-Ile-Ser-Val-Pro-Ala-Glu-Ile-Leu-Arg-Lys-Ser-Arg-Arg-Phe-Ala-Z-X.

Where Y is NH₂, one or more N-terminal amino acids, or other chemical entities added to facilitate coupling; Z is a bond, (an) amino acid(s), or (a) chemical group(s) which may be used for linking; and X is OH, NH₂, or a linkage involving either of these groups.

16. A peptide of the formula:

(XVI)

Y-Leu-Arg-Lys-Ser-Arg-Phe-Ala-Gln-Ala-Leu-Pro-Val-Trp-Ala-Arg-Pro-Asp-Tyr-Asn-Z-X.

Where Y is NH₂, one or more N-terminal amino acids, or other chemical entities added to facilitate coupling; Z is a bond, (an) amino acid(s), or (a) chemical group(s) which may be used for

linking; and X is OH, NH_2 , or a linkage involving either of these groups.

17. A peptide of the formula:

(XVII)

Y-Val-Trp-Ala-Arg-Pro-Asp-Tyr-Asn-Pro-Pro-Leu-Val-Glu-Thr-Trp-Lys-Lys-Pro-Asp-Tyr-Z-X.

Where Y is NH₂, one or more N-terminal amino acids, or other chemical entities added to facilitate coupling; Z is a bond, (an) amino acid(s), or (a) chemical group(s) which may be used for linking; and X is OH, NH₂, or a linkage involving either of these groups.

is 18. A peptide of the formula:

(XVIII)

Y-Glu-Thr-Trp-Lys-Lys-Pro-Asp-Tyr-Glu-Pro-Pro-Val-Val-His-Gly-Cys-Pro-Leu-Pro-Pro-Z-X.

Where Y is NH₂, one or more N-terminal amino acids, or other chemical entities added to facilitate coupling; Z is a bond, (an) amino acid(s), or (a) chemical group(s) which may be used for linking; and X is OH, NH₂, or a linkage involving either of these groups.

19. A peptide of the formula:

(XIX)

Y-Val-His-Gly-Cys-Pro-Leu-Pro-Pro-Pro-Lys-Ser-Pro-Pro-Val-Pro-Pro-Pro-Pro-Arg-Lys-Z-X.

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Where Y is NH_2 , one or more N-terminal amino acids, or other chemical entities added to facilitate coupling; Z is a bond, (an) amino acid(s), or (a) chemical group(s) which may be used for linking; and X is OH, NH_2 , or a linkage involving either of these groups.

20. A composition comprising at least one of the peptides of claims 1 to 19.

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- 10 21. A composition comprising at least one of the peptides of claims 1 to 19 attached to a carrier.
 - 22. A method for the detection of antibodies to hepatitis C virus in a biological fluid such as serum or plasma, characterized by contacting body fluid of a person to be diagnosed with any of the peptides of claims 1 to 19 or compositions of claims 20 and 21, and detecting the immunological complex formed between said antibodies and the antigen(s) used.
- 23. The method of claim 22, characterized in that said detection of said immunological complex is achieved by reacting said immunological complex with a labeled reagent selected from anti-human immunoglobulin-antibodies or staphylococcal A protein or streptococcal G protein or avidin or streptavidin and detecting the complex formed reagent between said conjugate and said reagent.
 - 24. A kit for the detection of anti-hepatitis C virus antibodies in a biological fluid, comprising:
 - a composition as defined in either of claims 20 or 21.
- the means for detecting the immunological complex formed.

25. The kit of claim 24, characterized in that said means for detecting said immunological complex comprise anti-human immunoglobulin(s) or protein A or protein G or avidin or streptavidin and means for detecting the complex formed between the anti-HCV antibodies contained in the detected immunological conjugate.